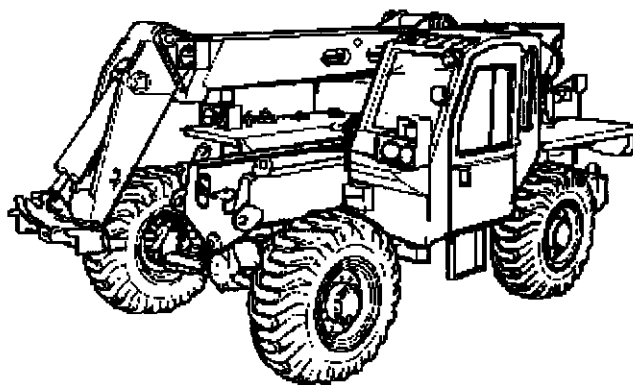


SOW 00-837-2-09276A-2/1

STATEMENT
OF
WORK (SOW)
FOR THE
TRUCK, FORKLIFT, VARIABLE REACH
INSPECT AND REPAIR ONLY AS NECESSARY (IROAN)



NSN 3930-01-305-2111

EFFECTIVE DATE: 01 OCTOBER 1999

TABLE OF CONTENTS

Section and Reading	Page
1.0 Scope	1
1.1 Background	1
2.0 Applicable Documents	1
2.1 Military Specifications	1
2.2 Military Standards	1
2.3 Other Government Documents and Publications	2
2.4 Industry Standards	3
3.0 Requirements	3
3.1 General Tasks	3
3.2 IROAN Objective and Functions	3
3.3 Specific Tasks	4
3.3.1 Phase I Pre-Induction	4
3.3.2 Phase II IROAN	4-21
3.3.3 Phase III - Inspection, Testing and Acceptable	21
3.3.4 Phase IV Packaging, Handling, Storage and Transportation (PHS&T)	22
3.4 Configuration Management	23
3.4.1 Configuration Status Accounting (CSA)	23
3.4.2 Configuration Control	23
3.5 Government Furnished Equipment Accountability (GFE)	24
Government Furnished Materiel (GFM)	
3.6 Contractor Furnished Material (CFM)	23
3.7 Quality Assurance Provisions	24
3.8 Acceptance	25
3.9 Rejection	25
4.0 Reports	25
4.1 Pre-Induction Checklist	25
4.2 Transmission Dynamometer Run-in Sheet	25
4.3 Engine Dynamometer Run-in Sheet	26

4.4	Final Road Test Inspection Checklist	26
4.5	Configuration Inspection Checklist	26
Appendix A. Pre-Induction Checklist		
Appendix B. Transmission Dynamometer Run Sheet		
Appendix C. Engine Dynamometer Run Sheet		
Appendix D. Final Road Test Checklist		
Appendix E. Configuration Inspection Check		

**STATEMENT OF WORK FOR THE
TRUCK FORKLIFT VARIABLE REACH
MODEL MLULL10K**

Inspect Repair Only As Necessary (IROAN)

1.0 **SCOPE.** This Statement of Work (SOW), establishes and sets forth tasks and identifies the work efforts that shall be performed by the Contractor in the IROAN effort of the TRUCK FORKLIFT VARIABLE REACH. This document contains requirements to restore the TRUCK FORKLIFT VARIABLE REACH to condition code "A." Condition code A is defined as "serviceable/issuable without qualification. Equipment defined as such should be new, used, repaired or reconditioned material which is serviceable/issuable to all customers without limitation or restriction. This includes material with more than 6 months shelf-life remaining". National Stock Number (NSN) 3930-01-305-2111 shall be known as TRUCK FORKLIFT VARIABLE REACH.

1.1 **BACKGROUND.** IROAN is defined as "the maintenance technique which determines the minimum repairs necessary to restore equipment components or assemblies, to prescribed standards by utilizing all available diagnostic equipment and test procedures in order to minimize disassembly and parts replacement."

2.0 **APPLICABLE DOCUMENTS.** The following documents form a part of this SOW to the extent specified. Unless otherwise specified, issues of these documents are those listed which are in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirement.

2.1 **MILITARY SPECIFICATIONS**

MIL-C-81309E	Corrosion Preventive Compounds, Water Displacing, Ultra-Thin Film
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MIL-C-62218	Undercoating
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2.2 **MILITARY STANDARDS.**

MIL-STD-129	DoD Standard Practice for Military Marking.
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MIL-STD-130	DoD Standard Practice for Identification Marking of U.S. Military Property
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MILITARY STANDARDS-(FOR GUIDANCE ONLY)

MIL-STD-973	Configuration Management.
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2.3 OTHER GOVERNMENT DOCUMENTS AND PUBLICATIONS. The issues of these documents cited below shall be used.

ATPD 2241	Vehicles, Wheeled: Preparation For Shipment and Storage of
MCO P11262.2	Inspection, Testing, and Certification of Tactical Ground Load Lifting Equipment
MI-09276A-25/1	Truck, Lift Fork MLULL10K Installing a safety pin and wire rope assembly on extendible boom. date 95174
MI-09276A-25/2	Installation of additional upper door latch, dated 26 Feb.1997
MI-09276A-25/3	Provide access for fuel sending unit and fuel pickup tube, dated 01 May 1997
MI-09276A-25/4	Installation of alarm system for emergency steer pump, dated 24 Nov. 1998
MI-09276A-45/5	Installation of Field Kit, Outer Boom
TI-09276A-35/1	Adjust Brake Ped/Valve Fork Lift date 93246
TI-09276A-35/2	Truck Forklift MLULL10K Repair procedures for engine mount flange date 96034
TI-09276A-35/3	Shim Procedures for Boom Assembly dated 19 Dec. 1997
TM-09276A-24P/3	Truck Forklift MDL MLULL10K Parts Manual
TM-09276A-24P/3	USMC Supplement, Truck Forklift MDL MLULL10K PM
TM-09276A-24/2	Truck Forklift, Variable Reach Service Manual
TM-4750-15/1	Painting and Registration Marking for Marine Corps Combat and Tactical Equipment
SL-3-09276A	Truck, Lift, Fork MLULL10K Components List
DoD 4000.25-1-M	MILSTRIP Manual
NAVICPINST 4491.2A	Requisitioning of Contractor Furnished Material From The Federal Supply System
TM 3080-34	Corrosion Prevention and Control

2.4 **INDUSTRY STANDARDS.**

ANSI/ISO/ASQC Q9002-1994 Quality Systems

Copies of Military Specifications and Standards are available from the Naval Publications and Forms Center, (ATTN: NPODS), 5801 Tabor Avenue, Philadelphia, PA 19120-5099. Copies of other government documents and publications required by contractors in connection with specific SOW requirements shall be obtained through the Contracting Officer: Commander, Attn: Contracting Officer (Code 891) Marine Corps Logistics Bases, 814 Radford Blvd., Albany, Georgia 31704-1128, commercial telephone number (912) 439-6761 or DSN 567- 6761. Copies of engineering drawings, if applicable, shall be obtained from Life Cycle Management Center, Attn: Code 825-3, 814 Radford Blvd. Suite 20320, Albany, Georgia 31704-0320, commercial telephone number (912) 439-6410 or DSN 567-6410.

3.0 **REQUIREMENTS**

3.1 **GENERAL TASKS.** In fulfilling the specified requirements, the Contractor shall render, yet shall not be limited to the following tasks

a. Provide materials,. labor, facilities, missing parts, and repair parts necessary to inspect, diagnose, restore, and test the TRUCK, FORKLIFT, VARIABLE REACH. Upon completion of IROAN, repaired equipment shall be Condition Code "A". TM 09276A-24P/3, Truck Forklift, MDL MLULL10K Parts Manual and TM 09276A-24P/3 USMC Supplement, Truck Forklift MDL MLULL10K PM (Parts Manual) contains the complete parts list for the TRUCK, FORKLIFT VARIABLE REACH.

b. Provide all tools and test equipment required to test, inspect, and calibrate the TRUCK, FORKLIFT VARIABLE REACH.

c. Conduct final-on-site testing for witness by the Weapon System Manager MARCORLOGBASES Albany, Code 837-2 and/or their Representatives .

d. The Contractor shall be responsible for all structural, electrical and mechanical requirements associated with the restoration of the TRUCK FORKLIFT, VARIABLE REACH.

3.2 **IROAN OBJECTIVE AND FUNCTIONS.** After IROAN, the TRUCK FORKLIFT, VARIABLE REACH shall have the following minimum characteristics:

- a. Reliable as per system specifications
- b. Maintainable as per system specifications
- c. Serviceable (Condition Code "A")
- d. All equipment systems and components shall operate as intended.

3.3. SPECIFIC TASKS. The following tasks describe the different phases for IROAN of the TRUCK FORKLIFT, VARIABLE REACH.

Phase I	Pre-Induction
Phase II	IROAN
Phase III	Inspection, testing and acceptance
Phase IV	Packaging, Handling, Storage and Transportation (PHS&T)

3.3.1. PHASE I-PRE-INDUCTION.

a. A pre-induction inspection analysis shall be performed for the TRUCK FORKLIFT, VARIABLE REACH using the Contractor's diagnosis, inspection and testing techniques to determine extent of work and parts required. These findings shall be annotated on the Pre-Induction Checklist located in Appendix A and shall be maintained and be made available upon request to the MARCORLOGBASES Albany, representatives.

b. Test equipment shall be used to determine that assemblies and subassemblies meet prescribed reliability, performance, and work requirements. In cases when conformance to the SOW cannot be certified through existing inspection and testing procedures and by use of diagnostic equipment, the assembly shall be removed, disassembled, inspected, tested or repaired to the degree necessary to assure full conformance with this SOW.

c. Oil seal and gasket leakage. Evidence of lubricating or hydraulic oils passing through or around a seal is not a defect; however, consideration must be given to the fluid capacity in the item being checked/inspected. Inspection shall normally be performed during and immediately following an operational test, but not sufficient duration to allow the fluids to return to ambient temperature. The following shall be used as a guide in determining degree of oil loss:

(1) Class I - Seepage of fluid (indicated by wetness or discoloration) not great enough to form drops.

(2) Class II - Leakage of fluid great enough to form drops, but not enough to cause drops to fall from the item being checked/inspected.

(3) Class III - Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

NOTE

A CLASS I OR II LEAK, EXCEPT FUEL SYSTEM AND BRAKE SYSTEM, IS AN ACCEPTABLE CONDITION AT ANY TIME AND DO NOT REQUIRE CORRECTIVE ACTION.

3.3.2 PHASE II - IROAN. IROAN shall be performed at the Contractor's facility. Information recorded on the IROAN Pre-Induction Checklist during pre-inspection phase shall be used as a guide by the contractor to achieve the mechanical baseline of production. After pre-induction

tests and inspections have been completed, repair of the TRUCK FORKLIFT, VARIABLE REACH shall be accomplished in accordance with this SOW and TM 09276A-24/2. Deficiencies noted on the Pre-Induction Checklist during Phase I shall be repaired/replaced. Components or assemblies shall not be disassembled for replacement of mandatory parts unless that part has failed, or the component assembly wherein the part is located is disassembled for repair.

Dynamometer Run Sheet for engine and transmission shall be completed, along with the Final Road Test Checklist which is in Appendix D of this SOW.

The following efforts shall be performed as part of the IROAN:

a. **DETAILED MECHANICAL REWORK.** TRUCK FORKLIFT, VARIABLE REACH received for IROAN shall be reworked in accordance with the following paragraphs. All discrepancies noted on the Pre-Induction Checklist shall be repaired/replaced.

b. **HARDWARE**

(1) Replace broken, unserviceable and/or missing hardware including nuts, bolts, screws, washers, turnlock fasteners, safety, and one-time use items, etc., in accordance with the IROAN. Unserviceable would include any of the above that failed to function properly.

(2) Ensure proper hardware locking devices are present on all moving mechanical assemblies.

(3) Hardware normally supplied with commercial parts shall be used unless specifically prohibited.

(4) Hardware used in this IROAN SOW shall be in accordance with existing technical publications.

NOTE

The requirement for separating the engine and transmission assemblies and running them on their independent dynamometers will be adhered to.

c. **ENGINE ASSEMBLY/TRANSMISSION**

(1) **TEST PROCEDURES.** After all pre-induction tests and inspections have been completed, the power pack shall be removed from the equipment, steam cleaned, and inspected for loose or missing items. The engine assembly shall be separated from the transmission assembly.

After engine and transmission separation, inspect engine mounting flange to assure TI-09276A-35/2 has been applied. If not applied, application of TI-09276A-35/2 is required under the provisions of this SOW.

The engine assembly shall be attached to an engine dynamometer and the engine run-in test shall be performed at that time. Refer to paragraph 3.2.2E for the test procedures for the fuel system which shall be tested in conjunction with the engine test.

The transmission shall be processed in accordance with paragraph 3.2.2.T.

Record all results of this test on the Dynamometer Run-in Sheet, Appendix B. Dynamometer Run-in Schedule shall be maintained and be available to the MARCORLOGBASES Albany, representatives.

Test the following, in accordance with TM 09276A-24/2 to conform with inspection and testing procedures to assure full conformance with this SOW.

(2) PASS/FAIL. After the engine run test has been finished, the completed Engine Dynamometer Run-in Schedule shall be compared with the acceptable operating specifications for the TRUCK FORKLIFT, VARIABLE REACH. The engine assembly shall meet or exceed the minimum specifications to be considered as having passed. In the event the engine assembly fails to meet the specifications, further tests shall be performed in accordance with the Engine Dynamometer Run-in Sheet. Reference Appendix C .

NOTE

The above procedures for repair/replacement can be found in TM-09276A-24/2.

d. Fuel System.

(1) Test Procedures. Test the following in accordance with TM 09276A-24/2 to conform with inspection and testing procedures to assure full conformance with this SOW.

Test all fuel injectors during the dynamometer engine run-in test.

(a) Inspect the fuel pump assembly for loose or broken items and housing cracks. During the dynamometer engine run-in test, assure that the fuel pump is properly timed.

(b) Inspect the fuel primer pump for leakage.

(c) Inspect the air cleaner indicator for proper function.

(d) Inspect fuel tank and lines for rusting and leakage.

(e) Inspect ether cold starting system switch, cylinder valve, pressure switch, thermal close valve/bushing, and atomizer cylinder for proper function and cracked/leaking tubing. Inspect engine cold starting switch, wiring and pre-heater.

(f) Inspect accelerator pedal and linkage for binding and proper function.

(g) Inspect air cleaner assembly for corrosion, damage and leaking.

(2) **PASS/FAIL.** Repair/Replace injectors that do not pass the dynamometer engine run-in test.

(a) Repair/Replace any fuel pump assembly that do not pass the dynamometer engine run-in test.

(b) Replace the fuel primer pump if leaking. Assure that the pump is secure and free of leaks.

(c) Replace the air indicator if not functioning properly.

(d) Repair/Replace any fuel tank and lines that are rusting and leaking.

(e) Repair/Replace either cold starting system switch, cylinder valve, pressure switch, thermal close valve/ bushing, and atomizer cylinder that do not function properly. Repair/Replace any cracked/leaking tubing. Repair/Replace engine cold starting system switch, wiring, and pre-heater that does not function properly.

(f) Repair/Replace the throttle linkage if binding. Replace all broken or bent accelerator pedals. Replace all broken and distorted springs.

(g) Repair/Replace any hose, tube, and clamp that is leaking, damaged, or stripped.

(h) Replace all fuel filters and air filters 100 percent.

The above procedures for repair/replacement can be found in TM 09276A-24/2

e. Hydraulic System.

(1) **TEST PROCEDURES.** Hydraulic fluid test procedure. Connect the test hose assembly to the sampling valve on the pump unloading and heat circuit block. Start the forklift, open the needle valve in the test hose assembly, and drain approximately two gallons of hydraulic fluid from the test hose to flush the hose thoroughly. Without closing the needle valve, pass the sample bottle into the oil stream and fill sample bottle. Close the needle valve. Shut off the forklift and disconnect the test hose assembly. Analyze the samples using the automatic bottle sampler, sensor and particle counter.

Test the following, in accordance with TM 09276A-24/2 to conform with inspection and testing procedures to assure full conformance with this SOW.

The hydraulic system on the TRUCK FORKLIFT, VARIABLE REACH is a closed center, constant pressure system. The hydraulic system consists of the following circuits.

(a) Boom Extension

- (b) Boom Lift
- (c) Carriage Tilt
- (d) Transfer Carriage
- (e) Frame Tilt
- (f) Boom Knuckle Steering
- (g) Service Brakes
- (h) Parking Brakes
- (i) Fork Side Shift
- (j) Fork Positioning

Systems To Inspect

- (a) Carriage Tilt Cylinder (Front)
- (b) Manifold Valve
- (c) Knuckle Tilt Cylinder
- (d) Steer Priority Valve
- (e) Boom Directional Control Valve
- (f) Emergency Steer Motor
- (g) Hydraulic Pump
- (h) Hydraulic Reservoir
- (i) Boom Extension Cylinder
- (j) Transfer Carriage Cylinder
- (k) Boom Hoist Cylinders (2)
- (l) Carriage Tilt Cylinder (Rear)
- (m) Auxiliary Control Joy-Stick

- (n) Boom Control joystick
- (o) Steer Control Unit
- (p) Parking Brake Control Valve
- (q) Steer Mode Selector
- (r) Service Brake Accumulator
- (s) Auxiliary Directional Control Valve
- (t) Service Brake Valve
- (u) Pump Unloading & Heat Circuit Block
- (v) Pressure Filter
- (w) Fork Side Shift Valve
- (x) Steer Cylinders (4)
- (y) Frame Tilt Cylinder

(2) PASS/FAIL. Repair/Replace any of the above if fail test in accordance with TM 09276A-24/2. Tube lines that are pinched or dented replace. Replace hose if any of the following conditions exist:

(a) Replace if any evidence of hydraulic oil leakage at the surface of the hose or its junction with the metal end couplings.

(b) Replace if any blistering or abnormal deformation to the outer covering of the hose.

(c) Replace if hydraulic oil leak at any threaded or clamped joint that cannot be eliminated by normal tightening.

(d) Replace if evidence of excessive abrasion or scrubbing on the outer surface of hose or hoses.

The above procedures for repair/replacement can be found in TM 09276A-24/2

f. Cooling System

The cooling system for the power unit consists of a radiator, water pump, one or two thermostats located in the same area, and a water manifold. The purpose of the cooling system is to transfer

heat from the engine to the radiator to dissipate the heat to the outside air. Coolant is circulated in the engine water jacket and through the radiator by the water pump which is of the centrifugal vane impeller type. The thermostat opens and closes to control the flow of coolant to the radiator. The hoses carry the coolant to and from the radiator

(1) TEST PROCEDURES. Test the following. in accordance with TM 09276A-24/2 to conform with inspection and testing procedures to assure full conformance with this SOW.

Inspect hose clamps for tightness.

- (a) Inspect surge tank and cap for leaks.
- (b) Inspect water manifold for leaks.
- (c) Inspect thermostat housing for leaks.
- (d) Inspect engine oil cooler for leaks.
- (e) Inspect transmission oil cooler for leaks.
- (f) Inspect fan blades for breaks, bends, and missing rivets.
- (g) Inspect water pump for leaks and cracks.
- (h) Inspect fan clutch for unusual noises.
- (i) Inspect radiator for cracks, leaks, bent fins, and clogging that will prevent air flow through radiator..
- (j) Inspect fan shroud for cracks and holes.

(2) PASS/FAIL. Replace coolant, coolant belts, and heater hoses. Replace antifreeze protection. Replace any hose or the above equipment that fail test in accordance with TM 09276A-24/2. Replace damaged radiator. Straighten radiator fins if possible and clean radiator to assure air will pass through it.

The above procedures for repair/replacement can be found in TM 09276A-24/2

g. BOOM, KNUCKLE & FORK CARRIAGES

The boom is comprised of two sections (inner and outer) which are constructed of high strength steel tubing which incorporate a series of openings along both sides for access to boom internals. A double acting hydraulic boom extension cylinder, located within the boom, extends and retracts the inner boom section. The base end of the boom extension cylinder is mounted to the

rear of the outer boom. The rod end of the cylinder is connected to the forward portion of the inner boom. The boom section are shimmed to maintain a prescribed clearance.

(1) TEST PROCEDURES. Test the following, in accordance with TM 09276A-24/2 to conform with inspection and testing procedures to assure full conformance with this SOW.

- (a) Two Section Boom
- (b) Knuckle
- (c) Carriage Tilt Cylinders
- (d) Fork Carriages

(2) PASS/FAIL. Repair/Replace the above equipment in accordance with TM 09276A-24/2. Boom shall be property shimmed used the shim procedures in TM 09276A-24/2 and TI-09276A-35/3.

h. TRANSFER CARRIAGE

The forklift incorporates a patented transfer carriage which provides additional boom reach when placing a load, after the forklift is positioned, without requiring movement of the forklift itself. The transfer carriage supports the boom and rides upon rails by way of rollers as the carriage moves forward and rearward, powered by a hydraulic cylinder. Total travel distance of the transfer carriage is 70 inches.

(1) TEST PROCEDURES Test the following, in accordance with TM 09276A-24/2 to conform with inspection and testing procedures to assure full conformance with this SOW.

(2) PASS/FAIL. Replace/Repair the above equipment in accordance with TM 09276A-24/2

i. AXLES

(1) TEST PROCEDURES. Test the following, in accordance with TM 09276A-24/2 to conform with inspection and testing procedures to assure full conformance with this SOW.

The front and rear axles for model MLULL10K forklift are identical, except the front axle incorporates a disc and caliper parking brake. The axles are a Clark Model 12A0840 Off-Highway type that provides limited-slip drive, steering and braking functions. The axles consist of the following::

- (a) Ring and Pinion Carrier Assembly
- (b) Differential

- (c) Planetary Gear Hubs
- (d) Wheel End Wet Disc Brakes
- (e) Steer Universals
- (f) Steer Spindles
- (g) Dual Steer Cylinders
- (h) Tie Rod
- (i) Disc Brake (Front Axle)

(2) PASS/FAIL. Repair/Replace the above equipment in accordance with TM 09276A-24/2 to conform with inspection and testing procedures to assure full conformance with this SOW.

j. SUSPENSION SECTION

(1) TEST PROCEDURES. Inspect all shafts, universal joints, and yokes for cracks or bends.

- (a) Inspect accumulators for leaks and proper operation.
- (b) Inspect torque rods.

(2) PASS/FAIL. Repair/Replace all propeller shafts that are cracked and bent. Repair/Replace universal joint, sliding couplings and universal joint bearings that show rotary lost motion when rotated or shaken by hand. Replace yokes when cracked. Replace leaking and non-operational accumulators.

The above procedures for Repair/Replacement can be found in TM 09276A-24/2.

k. FRAME SECTION

(1) TEST PROCEDURES. Inspect frame, side rails, engine mounts, and cross members for loose mounting and broken welds.

(2) PASS/FAIL. Repair/Replace the frame, side rails, engine mounts, and cross members that have loose mounting and broken welds.

The procedures for Repair/Replacement can be found in TM 09276A-24/2.

1. FRONT/REAR BUMPERS, CAB ASSEMBLY, GLASS, WINDSHIELD WIPER ASSEMBLIES, TOWING HOOKS, AND MIRRORS.

(1) TEST PROCEDURES. Inspect front bumper and rear bumper for dents, alignment, and cracks.

(a) Inspect cab assembly, battery box, tool box, gas can bracket, cargo storage box, and ventilation/heater for breaks, cracks, and proper function. Doors, hood, and hardware shall function as intended. Inspect hood and cab for damage. Inspect hood insulation for sagging and missing insulation. Remove all insulation from cab/floor and inspect for corrosion.

(b) Inspect glass for breaks and cracks.

(c) Inspect windshield wiper for proper function.

(d) Inspect towing hooks for security.

(e) Inspect mirror bracket for security..

(2) PASS/FAIL.

(a) Repair/Replace cab assembly that has cracks, breaks, corrosion, and missing, damaged hardware. Repair/Replace the tool box, tool bracket, gas can bracket, and cargo storage box that has cracks, rust, breaks, and missing/damaged hardware. Dents, sags and bulges in the floor that do not exceed 7/16 inch are acceptable. Doors, hood, closure, and associated hardware shall function as intended. Indentations of no more than 1/2 inch are acceptable. The battery box shall be free of corrosion and acid deposits.

Repair/Replace any ventilation/heater control cables, hoses, screens, and doors that are ripped, torn, and are not functioning properly. Repair/Replace the hood insulation if damaged, sagging, or missing. Replace cab/floor insulation if torn or damaged beyond serviceability.

(b) Repair/Replace door and windshield glass that are cracked. Minor discoloration not more than 1 1/2 inches from the edge and on the right side of the windshield is acceptable. Scattered hairline scratches not within the driver's immediate vision are acceptable. Mounting and frames shall be secure. Seals shall be weather tight when this is the intended function. Slight weather cracking on rubber seals is acceptable.

(c) Replace wiper blades 100 percent. Repair/Replace wiper motor and wiper arms that do not function properly. Repair wiper hoses that leak (minor weather cracking is acceptable.)

(d) Repair/Replace pintles and towing hooks that are not properly secured to vehicle. Cotter pin shall be attached and fastened properly. Towing hook shall be properly mounted. Pintles shall be lubricated and operate freely. End play in excess of 1/4 inch is not acceptable. Wear on pintle shaft or bushing, or both, to the extent of 1/8 inch is acceptable.

(e) Replace broken/missing mirrors. Mounting shall be secure. Adjustment features shall function properly. Mirrors shall match on both sides the vehicle.

The procedures for repair/replacement can be found in TM 09276A-24/2

m. CUSHION/SEAT PADS, AND BACK/FRAMES.

(1) TEST PROCEDURES. Inspect back/frames, and tracks for damage, sagging, broken springs, deteriorated frames and proper function.

(2) PASS/FAIL. Replace cushion/seat pads if torn or contains holes larger than 3/8 inch dia.. Repair/Replace seat/back, frames and tracks that have damaged, sagging, broken springs, deteriorated frames, and tracks that do not operate properly.

The above procedures for Repair/Replacement can be found in TM 09276A-24/2

n. RUST PROOFING AND PAINTING (Exterior/Interior).

(1) TEST PROCEDURES. Inspect vehicle for body damage, cleanliness, and rust.

NOTE

Rust proofing does not apply to processing of fuel tanks, radiator, engine, transmission, vehicle suspension, transfer, and axles.

(2) PASS/FAIL . Repair all body and rust damage before rust proofing vehicle. All vehicles shall be rust proofed 100 percent. The repair facility shall undercoat the unexposed, (underside) and shaded area (under fenders) of the vehicles/equipment inducted for either rebuild or IROAN in the following manner:

(a) Clean area with either steam or high pressure water to remove dirt and loosen corrosion.

(b) Treat affected (corroded) areas with phosphoric fog.

(c) Reclean.

(d) Apply MIL-C-81309 TYPE I, a water displacing corrosion inhibitor, to the affected areas.

(e) Apply MIL-C-62218 TYPE II (Approved undercoating). Firewalls may be similarly treated to a minimum thickness of 3.5 mils. However, do not apply undercoating to components located on firewalls which are subject to heat transfer or normally not painted. Treat stage I and II corrosion in isolated and hard to reach areas not normally undercoated in the following manner:

(1) Clean area with either steam or high pressure water to remove dirt and loosen corrosion.

(2) Brush a phosphoric acid solution on the affected areas. Remove corrosion manually, as required.

(3) Reclean.

(4) Prime and paint per latest edition of TM 4750-15/1

Procedures for Corrosion Prevention and Control are in accordance with TM 3080-34.

All vehicles requiring repainting shall be painted with CARC paint and have 3-CCP Touchup applied. Painting is authorized 100 percent for corrosion control when the cost of touch up painting exceeds the cost of 100 percent painting. The painting of tires is not authorized. The removal of paint over spray from tires received for IROAN is not required. Precautions shall be taken to prevent further paint over spray on tires.

The above procedures can be found in TM 09276A-24/2.

o. ELECTRICAL SYSTEM.

NOTE

All vehicles for IROAN shall have batteries installed. Install batteries before testing the electrical system.

Two 12 volt batteries connected in series serve the 24 volt electrical system. The batteries are a wet-charge, lead-acid type and are located in a battery box on the right side deck.. They perform the following functions:

(1) Supply current for the starter motor.

(2) Supplement the alternator output when the demands of the electrical system exceed the output of the alternator.

(3) Act to stabilize the voltage in the electrical system.

The electrical system is a single wire, ground return type, utilizing the machines frame as ground.

(a) **TEST PROCEDURES.** Inspect all wiring harnesses, battery cables for corrosion, bent or missing pins, and ripped or torn insulation and tie wraps. The following electrical systems should be tested.

1. Instrument Panel Gauges for proper operation.

2. Instrument Panel Warning Lights.

3. Instrument Panel Light Mode Selection Switch.

4. Instrument Under panel Relays.

5. Hydraulic Pump Unloading Circuit

6. Emergency Steering Motor Circuit

7. Engine Start Circuit Breakers

8. Alternator and protective control box, with the proper test equipment

9. Inspect the headlights, blackout lights, turn signals, rear composite lights, side marker lights, reflectors, and instrument panel lights for cracks, corrosion, moisture, broken and blown bulbs.

(2) PASS/FAIL. Repair/Replace all missing and bent pins. Repair of insulation less than four inches in length may be accomplished using electrical tape. Tears or rips in excess of four inches shall require installation of new conduit. Corrosion shall be removed from components. Upon removal of corrosion, if component does not function properly, replace component. Replace all damaged battery cables. Replace any missing or damaged tie wraps.

(a) Replace any gauge or switch that does not function properly after assuring that the sending unit is not defective.

(b) Replace any wiring that is frayed or broken. Correct moisture in the lighting system by replacing the light cover gasket..

(c) Replace any selection switch that isn't working properly.

(d) Replace all under panel relays that are not functioning properly.

(e) Repair/Replace hydraulic pump unloading circuit if not functioning properly.

(f) Repair/Replace the emergency steering motor circuit if not functioning properly.

(g) Repair/Replace engine start circuit breakers that are not functioning properly.

(h) Repair/Replace the starter, alternator, and protective control box assembly that do not pass the pre-induction test. Install new dry batteries 100 percent.

(i) Replace any headlights, blackout lights, turn signals, rear composite lights, side marker lights reflectors, and instrument panel lights that are blown out or broken.

The above procedures for test/repair or replacement can be found in TM 09276A-24/2.

p. **BRAKE SYSTEM**

(1) TEST PROCEDURES.

- (a) Inspect all brake disc, pads for wear, and hoses for leaks.
- (b) Inspect parking brake caliper and disc for proper function.
- (c) Inspect parking brake control valve.
- (d) Inspect Accumulator for leaks.
- (e) Inspect air reservoir tanks for leaks and rust.
- (f) Inspect air bleeder valves, for leaks and proper operation.
- (g) Inspect all air brake lines for cracks and leaks.
- (h) Inspect seals and backup rings.
- (i) Inspect circuit pressure. Refer to Section 3.

(2) PASS/FAIL. Replace brake disc, pads and or lining with 50 percent of original thickness remaining. Disc shall not be cracked or distorted. Replacement of seals on end caps and gas valve is recommended if replacement of piston V-O-Ring is required in accumulator.

- (a) Repair/Replace any of the above items that do not conform with the requirements found in TM 09276A-24/2.
- (b) Replace leaking or damaged brake hoses.
- (c) The parking brake control valve shall be complete with all components and in serviceable condition and properly adjusted.
- (d) Parking/hand brake lining shall have at least 50 percent of original thickness remaining or they must be replaced. No evidence of grease or oil shall be on the parking brake lining.
- (e) Repair/Replace all air reservoir tanks showing evidence of leaks, cracks, or other damage. Repair/replace air reservoir tank support brackets that are cracked, broken, or otherwise damaged.
- (f) Replace brake lines if cracked or leaking. Brake lines will be of current diameter and length and free of kinks or flat sections. Fitting and nut shall not be distorted to the extent that they cannot be properly tightened.

(i) Replace front and rear glad hand grommets when they are hard, cracked, or missing.

(j) Adjust brake pedal/valve assembly in accordance with TI-09276A-35/1.

The above procedures for repair/replacement can be found in TM 09276A.-24/2

q. TIRES, WHEELS, SPLASH GUARDS

(1) TEST PROCEDURES. Inspect tire inflation. Inspect cupping, chunking, cuts, and cracks.

(a) Inspect wheels for cracks, breaks, and damaged mounting holes.

(b) Inspect for missing, damaged, or torn splash guards.

(2) PASS/FAIL. Each tire must have 4/32 inch or more of tread remaining and be in good serviceable condition. All tires on a vehicle shall be matched to provide proper performance and approximately equal life. Tires shall not show evidence of cupping or chunking. Tires shall not have cuts or cracks greater than one inch in length, 1/8 inch wide. Tires shall not have cuts or breaks, regardless of length or width, which extend to the fabric. Rubber separation or bulges on tire side walls are not acceptable.

Check TM 09276A-24/2 for the appropriate tires.

All tires that do not meet these requirements shall be replaced.

(a) Wheels shall be free of cracks, breaks, and damaged mounting holes. Front end alignment and toe-in adjustment shall meet the standards prescribed in the technical manual. All wheels that do not meet these requirements shall be replaced.

(b) Repair/Replace splash guards (front and rear) that are missing, damage, or torn.

The above procedures for repair/replacement can be found in TM 09276A-24/2

r. STEERING SECTION

(1) TEST PROCEDURES. Inspect power steering pump, steer mode selector valve, control unit, emergency steer motor and pump, reservoir, and cap for leaks and proper function.

(a) Inspect all power steering cylinder hoses for leaks.

(b) Inspect steering gear for leaks, damage, wear, and proper function.

(c) Inspect all power steering tubing for leaks, cracks, kinks, or flat sections.

(d) Inspect upper and lower steering column assemblies for bends, breaks, cracks, and wear.

(e) Inspect tubes for bends, breaks, cracks, deformities, and excessive play.

(f) Inspect steering wheel for cracks.

(g) Inspect for proper alignment and lubrication.

(2). PASS/FAIL. Repair/Replace the power steering pump reservoir, and cap if leaking and not functioning properly. Replace power steering fluid 100 percent.

(a) Replace the power steering hoses if leaking.

(b) Repair/Replace the steering gear if damaged, worn, leaking, and not functioning properly.

(c) Repair/Replace the power steering of cracks, kinks, leaking, or flattened tubing.

(d) Repair/Replace the upper and lower steering column universal joints, couplings, and universal joint bearings that show rotary lost motion when rotated or shaken by hand.

(e) Replace drag link, tubes that are bent, cracked, and deformed. The steering mechanism shall operate without binding or roughness on the drag link and steering linkage.

(f) Repair/Replace steering wheel as required.

(g) Realigned and lubricated 100 percent.

NOTE

No welding or straightening (hot or cold) shall be permitted on steering gear controls. Steering wheels with minor cracks 1/8 of an inch wide or less which do not extend to the steering wheel core may be repaired by filling with a non-shrinking epoxy and sanded smooth.

The above procedures for repair/replacement can be found in TM 09276A-24/2.

s. TRANSMISSION

The 1724M power shift is a forward and reverse transmission with 4 speeds in either direction. Forward motion, reverse motion, and the speeds are obtained through the use of hydraulically actuated multiple disc clutches. These clutches are power absorbing members that can be engaged at full engine power.

Shifting under full engine power makes these models a full power shift for the forward and reverse motion in all speeds.

(1) TEST PROCEDURES After pre-induction tests and inspections have been completed, the power pack assembly shall be removed from the vehicle, cleaned, and inspected

for loose or missing items. The transmission assembly shall be separated from the engine assembly. The transmission assembly shall be attached to a transmission dynamometer and the transmission dynamometer tests shall be performed at this time. All applicable data shall be recorded on the Dynamometer Run Sheet (Appendix B). The Dynamometer run sheet shall be maintained and be available to the MARCORLOGBASES Albany, representatives.

Test in accordance with TM 09276A-24/2 to conform with inspection and testing procedures to assure full conformance with this SOW.

- (a) Inspect the transmission converter for proper function.
- (b) Inspect the transmission For Position Control Valve.
- (c) Inspect the Primary Pump.
- (d) Inspect the Front Cover.
- (e) Inspect the Clutch Stack.
- (f) Inspect the Main Case.
- (g) Inspect the Mount Cover
- (h) Inspect transfer shift lever and linkage for proper operation.
- (i) Inspect the transfer mounts for deterioration.
- (j) Inspect transfer control valve for proper operation.
- (k) Inspect the transfer output shaft for excessive up and down play

(2) PASS/FAIL. Upon completion of the transmission assembly dynamometer run-in test, the data recorded shall be compared with the required specifications. The transmission assembly shall meet or exceed the minimum specifications to be considered as having qualified for reinstallation. In the event the transmission fails the testing, it shall be repaired prior to installation. The transmission oil, filter, and oil pan gasket shall be replaced.

- (a) Repair/Replace the transmission converter as required to ensure popper function.
- (b) Repair/Replace the transmission linkage assembly if it does not operate smoothly. Replace all broken cables. If any of the above is not repairable submit a WIR to the appropriate IM for action.

The above procedures for Repair/Replacement can be found in TM 09276A-24/2.

t. DATA PLATES AND DECALS.

DATA PLATE. Each repaired TRUCK FORKLIFT, VARIABLE REACH shall have an IROAN data plate affixed next to the existing vehicle data plate. The data plate shall meet the requirements of MIL-STD-130 and TM 4750-15/1.

(1) TEST PROCEDURES. Inspect vehicle for missing, damaged, and illegible data plates and decals.

(2) PASS/FAIL. Replace all data plates and decals that are missing and illegible. IROAN data plates shall be prepared by the Contractor and contain the following information:

VEHICLE SERIAL NO. _____
REPAIRED IN ACCORDANCE WITH SOW-00-837-2-09276A-2/1.
REPAIR FACILITY _____
DATE _____
ODOMETER READING AT TIME OF IROAN _____
HOUR METER READING AT TIME OF IROAN _____

NOTE

Odometers on vehicles IROANED under provisions of this SOW shall not be turned back to zero. Reading of hour meters that require replacement during the IROAN are to be recorded as information to be included in the record jacket of that vehicle. The vehicle record jacket is also to be annotated that these components were replaced during the IROAN and the reading annotated on the IROAN data plate is that of the hour meter that required replacement.

RECORD JACKET: All major equipment or components serial numbers that are replaced during the IROAN are to be identified by the Contractor to be recorded in the record jacket of the TRUCK FORKLIFT, VARIABLE REACH (This include engines, transmissions, etc.). Information will list the TRUCK FORKLIFT, VARIABLE REACH serial number, Name of equipment/component(s) replaced, serial number of deficiency equipment/component(s), serial number of replacement equipment/component(s), and if the equipment/component(s) is new or rebuilt..

All Modification Instructions (MI) and Technical Instruction (TI), installed as a result of this SOW are to be identified by the Contractor to be recorded in the vehicle record jacket. Information will list the Forklift serial number, MI, and/or TI, publication title and number.

3.3.3 PHASE III - INSPECTION, TESTING AND ACCEPTANCE.

a. Inspection, testing and Acceptance of the TRUCK FORKLIFT, VARIABLE REACH shall be conducted in accordance with Final Road Test Checklist, Appendix D and TM 09276A-24/2.

b. The Contractor shall be responsible for conducting required tests and shall ensure all necessary personnel are available to complete the final acceptance. Acceptance tests shall be held at the Contractor facility. MARCORLOGBASES, Albany, Georgia, representatives shall be given a minimum of two weeks notice prior to beginning acceptance testing. The test area shall be cleared of all equipment part, components, etc, not required for the test.

c. The Contractor shall be responsible for correcting any deficiencies identified during inspection/testing. MARCORLOGBASES, Georgia, representatives may require the Contractor to report tests or portions thereof, if the original tests fail to demonstrate compliance with this SOW.

d. Acceptance testing on all TRUCK FORKLIFT, VARIABLE REACH repaired under the provisions of this SOW shall be accomplished in accordance with TM 09276A-24/2 and the Final Road Test Checklist..

3.3.4 PHASE IV - PACKAGING, HANDLING, STORAGE AND TRANSPORTATION (PHS&T).

a. The Contactor shall be responsible for preservation and packaging of items being repaired under the terms of this statement of work. Items being prepared for long term storage shall be Level A in accordance with ATPD-2241. Items being prepared for domestic shipment, immediate use, and/or shipment to overseas destinations with the exception of Maritime Prepositioned Forces (MPF), shall be preserved to Level "B", Drive-on/ Drive-off. Items being prepared for overseas shipment shall have a label affixed which reads, "NOT FOR WEATHER DECK STOWAGE." Items scheduled for shipment to MPF shall be preserved to Level "B", MPS Modified Drive Away.

b. The Terms Drive-on/Drive-off and MPF Modified Drive Away are defined as follows:

(1) Drive-on/Drive-off: Batteries will be hot and disconnected from vehicle electrical system. Terminals and leads will be taped. Fuel tank will be filled ¼ full. The air intake system, exhaust and brake systems, drive-train and gauges are to be depreserved.

(2) MPF Modified Drive Away: Batteries shall be hot and connected to vehicle electrical system. Fuel tank shall filled ¾ full of JP5. The air intake system, exhaust and brake systems, drive-train and gauges are to be depreserved. Fire extinguisher bracket and all seats shall be installed.

c. Marking shall be in accordance with MIL-STD-129.

d. The Marine Corps will provide the contractor with shipping address(es) for delivery of repaired equipment. The Contractor shall be responsible for arranging for shipment of the equipment to the pre-designed site(s). The Marine Corps will be responsible for transportation costs associated with shipping the subject equipment to and from the contractor.

3.4 CONFIGURATION MANAGEMENT

3.4.1 CONFIGURATION STATUS ACCOUNTING (CSA).

a. The following approved Modification Instructions (MIs) and Technical Instructions (TIs) shall be applied during Phase II of the IROAN process. MI-09276A-45/5 shall be installed only when required. MI-09276A-25/1, MI-09276A-25/2, MI-09276A-25/3, MI-09276A-25/4, MI-09276A-45-5, TI-09276A-35/1, TI-09276A-35/2, and TI-09276A-35/3.

b. The Contractor shall determine the application status of approved configuration changes by visual inspections to the extent possible. The government will identify the configuration changes to be inspected by furnishing a Configuration Inspection Checklist (Appendix E) to the Contractor. The Contractor shall use one checklist for each TRUCK FORKLIFT VARIABLE REACH to record the inspection findings along with other required data.

c. The Contractor shall record serial numbers of the assemblies listed on the Configuration Inspection Checklist. The Contractor shall record the information on the same form that was used to record the application status of configuration changes.

3.4.2. CONFIGURATION CONTROL.

The Contractor shall apply configuration control to established baseline configuration item. Deviations from this established baseline configuration will not be allowed, without the written approval of the Weapon System/Equipment Manager (Code 837-2). If it is necessary to depart from the Authorized configuration, the Contractor shall prepare and submit a Request for Deviation or Request for Waiver. MIL-STD-973 (paragraphs 5.4.3 and 5.4.4 and appendix E) may be used as guidance.

3.5 GOVERNMENT FURNISHED EQUIPMENT(GFE) ACCOUNTABILITY/ GOVERNMENT FURNISHED MATERIAL (GFM). GFE is government owned equipment authorized by contract for use by a commercial/government contractor. It is neither consumed during production nor incorporated into any product. GFM is materiel furnished to a contractor that will be consumed during the course of production or incorporated into product being manufactured/remanufactured under a contract/ statement of work. In the event the Marine Corps does have GFE/GFM requirements, the Management Control Activity (MCA/G316-2), Marine Corps Logistics Bases, Albany, Georgia, will coordinate required GFE and will maintain a central control on Marine Corps assets in the Contractor's possession. The MCA will forward a GFE Accountability agreement to the Contractor Facility for signature to establish a chain of custody and property responsibilities for Marine Corps assets. The Contractor shall report receipt of all GFM and report consumption of GFM to the MCA.

3.6 CONTRACTOR FURNISHED MATERIEL (CFM).

The Marine Corps has adopted the Navy's procedures regarding Contractor Furnished Materiel (NAVICPINST 4491.2A). In the event that Contractor Furnished Materiel is required for repair

parts, the contractor shall requisition through the DOD Supply System. DOD 4000.25-1-M, (MILSTRIP) Chapter 11 authorizes contractors to requisition through the DOD Supply System.

3.7 QUALITY ASSURANCE PROVISIONS

The performances of the Contractor and the quality of work delivered, material provided and documents written shall be subject to in-process review and inspection by the Weapon System Manager, MCLB Albany , Code 837-2 and/or their representatives during contract performance. Inspection may be accomplished at any work location. Authorized Weapon System Manager, MCLB Albany , Code 837-2 representatives shall be permitted to observe the work/task accomplishment or to conduct inspections at all reasonable hours within contractor normal working hours. Acceptance tests shall be held in-plant. Inspection by Weapon System Manager MCLB Albany , Code 837-2 and/or their representatives of all acceptance tests plans, materials and associated lists furnished hereunder does not relieve the Contractor from any responsibility regarding defects or other failures to meet contract requirements which may be disclosed prior to final acceptance.

The Contractor shall provide and maintain a Quality System that as a minimum, adheres to the requirements of ANSI/ISO/ASQC Q9002-1994 Quality System Model for Quality Assurance in Production, Installation, and Servicing. The Contractors work shall be subject to in-process reviews and inspections for compliance with Quality Systems by Weapon System Manager, MCLB Albany , Code 837-2 and/or their representatives. Noncompliance with procedures resulting in degraded quality of work may result in a stop-work order requiring action by the Contractor to correct the work performed and to enforce compliance with quality assurance procedures or face contract termination. Notwithstanding such Weapon System Manager, MCLB Albany , Code 837-2 and/or their representative's inspection, it shall be the Contractor responsibility to ensure that the entire system meets the performance requirements delineated and addressed in the TRUCK FORKLIFT VARIABLE REACH TM 09276A-24/2 and this SOW.

Quality assurance operations performed by the Contractor shall be subject to the Weapon System Manager, MCLB Albany , Code 837-2 and/or their representatives verification at any time. The Weapon System Manager, MCLB Albany , Code 837-2 and/or their representatives verifications can include, but shall not be limited in any matter, to the following:

- a. Inspection of materials, products, assemblies, and documentation to assess compliance with quality standards.
- b. Surveillance of operations to determine that quality assurance, practices, methods, and procedures are being properly applied.
- c. Inspections of deliverable products to assure compliance with all requirements of the TRUCK FORKLIFT VARIABLE REACH , this SOW, and applicable documents used herein.
- d. Failure of the repair facility to promptly correct deficiencies discovered, shall be a reason for suspension of acceptance until corrective action has been made.

3.8 **ACCEPTANCE**

The performance of the Contractor and the quality of work delivered, including all equipment furnished and documentation written or compiled, shall be subject to in-process review and inspection during performance. Inspection may be accomplished in-plant or at any work site or location, and Marine /Corps representatives shall be permitted to observe the work or to conduct inspection at all reasonable hours. Final inspection and acceptance testing shall be conducted at the Contractor's facility. Finally acceptance shall be conducted on 100 percent of items to verify that the units meet all requirements.

a. Acceptance testing. The TRUCK FORKLIFT VARIABLE REACH vehicles IROANED under the provisions of this SOW shall be accomplished in accordance with TM 09276A-24/2.

b. As required by MCO P11262.2. Contractor shall provide Condition Inspection Record for each Truck Forklift, Variable Reach that is IROANed under the provisions of this SOW. The Truck Forklift, Variable Reach shall be stenciled, in a position clearly visible to the operator, with certification data indicating the test status (Example: CAP 10,000 lb certified 15 June 1998). Condition Inspection Record is found in MCO P11262.2, Table 4-2.

c. All SL-3-09276A components provided to the contractor for repair/replacement under the provisioning of this SOW shall be returned repaired/replaced.

3.9 **REJECTION**

Failure to comply with any of the specified requirements listed herein shall be reason for rejection by MARCORLOGBASES, Albany, representative. The Contractor shall, at no additional cost to MARCORLOGBASES, Albany Georgia, provide the following:

a. Develop an approach for modification or correction of all deficiencies.

b. On approval of a documented approach, the Contractor shall correct the deficiencies and repeat verification until acceptable compliance with acceptance test procedures is demonstrated.

4.0 **REPORTS**

4.1 Pre-Induction Checklist. The Contractor shall complete the Pre-Induction Checklist (Appendix A) for each TRUCK FORKLIFT VARIABLE REACH repaired. These documents shall be available during final acceptance testing. One copy of each document shall be provided to MARCORLOGBASES, Albany, Georgia, Code 837-2 after final acceptance of the TRUCK FORKLIFT VARIABLE REACH.

4.2 Dynamometer Run-in Sheet. The Contractor shall provide one copy, per vehicle of the Dynamometer Run Sheet (Appendix B) MT-654 Transmission, test results, performed on the transmission. If the transmission fails the pre-induction Dynamometer run sheet requirements, it

must be repaired/rebuilt and a final Dynamometer test performed under the terms of this SOW. These sheets shall be available for review during the final acceptance testing and shall be sent to MARCORLOGBASES Albany Code 837-2 upon acceptance of vehicle.

4.3 Dynamometer Run-in Sheet. The Contractor shall provide one copy, per vehicle, of Dynamometer run-in schedule (Appendix C), test results performed on the engine during the pre-induction Phase. If the engine fails the pre-induction Dynamometer run sheet requirements, it must be repaired/rebuilt and a final Dynamometer test performed under the terms of this SOW. These sheets shall be available for review during the final acceptance testing and shall be sent to MARCORLOGBASES Albany Code 837-2 upon acceptance of vehicle.

4.4 The Contractor shall provide one copy, per vehicle, of the Final Road Test Checklist (Appendix D). This Checklist shall be available for review during the final acceptance testing and shall be sent to MARCORLOGBASES Albany, upon acceptance of vehicle.

4.5 The Contractor shall provide one copy, per vehicle of the Configuration Inspection Checklist (Appendix E). This Checklist shall be available for review during the final acceptance testing and shall be sent to MARCORLOGBASES Albany, upon acceptance of vehicle.

**PRE-INDUCTION CHECKLIST
TRUCK, FORKLIFT, VARIABLE REACH**

Vehicle Serial Number: _____

Vehicle Hours: _____

TRUCK FORKLIFT, VARIABLE REACH IF NOT APPLICABLE MARK N/A IN REMARKS BOX.	S A T	M I S S I N G	S E R V I C E	A D J	R E P A I R	R E P L A C E	M O D I F Y	REMARKS	I N S P E C T
Driver Side									
1. <u>Body and Cab.</u> Inspect for serviceability, Note broken or missing parts, rust or corrosion.									
a. Operators Side									
2. <u>Cab Doors.</u> Inspect for damage, miss- alinement, rust, or corrosion. Ensure All Seals and doors are serviceable.									
a. Operators Side									
3. <u>Vehicle Frame.</u> Visually inspect frame, cross- members and under body for bends, broken welds, and corrosion.									
4. <u>Rubber Insulators.</u> Inspect for tears cracks, bent or broken hardware.									

5. <u>Cab Mounts</u> Inspect for loose or broken welds and rusted conditions.									
6. <u>Access Panels.</u> Check all covers for damage or cracks. Check all caps screws for tightness.									
7. <u>Fenders.</u> Inspect for loose mounting bolts, distortion, wear and cracks.									
8. <u>Cab Step/Vehicle Step.</u> Inspect for loose mounting bolts, distortion, wear and cracks.									
9. <u>Glass.</u> Inspect all glass for distortion wear, cracks and pitting.									
10. <u>Towing Connections.</u> Inspect for loose mounting hardware and damage.									
11. <u>Headlights.</u> Inspect for loose mounting hardware, loose electrical connections and damage. Ensure Serviceability.									
12. <u>Lights.</u> Inspect the following lights for loose mounting hardware, loose electrical connections, burned out bulbs, or broken lens. Note location in "Remarks" column.									
a. Clearance Lights									

b. Interior Lights									
c. Search Lights									
d. Work Lights									
e. Tail Lights/Shop Lights/Turn Indic/Lights.									
13. <u>Tires.</u> Inspect ALL tires for cuts, gouges, cracks and service ability, Note locaion in "Remarks"									
14. <u>Wheels.</u> Inspect all wheels for broken, cracked, or bent surfaces. Ensure that the side ring and clamp plate are serviceable and fit securely in their grooves. Note location of defective wheels in "Remarks" column.									
15. <u>Wheel Studs and Nuts.</u> Check all wheel studs, nuts and inspect for missing nuts. Note defective items in "Remarks" column.									
16. <u>Front Pnuematic Couplings</u> <u>(Glad Hands).</u> Inspect glad hands for damage. Inspeck glad hands for missing or rotted seals.									
a. Operator Side									
b. Right Side									
II. <u>Undercarriage And Frame</u>									

1. Inspect under the vehicle for fuel, oil, or coolant leakage.									
2. Operator Side. Inspect for missing or broken suspension.									
3. <u>Transmission.</u> Inspect for cracks, leaks, damage,. Check shift cable for kinks and excessive play. Inspect transmission oil pan bolts for looseness and out put shaft seal for damage or leaks									
a. Cracks/Damage									
b. Shift Cables									
c. Oil Pan Bolts									
d. Seals									
4. <u>Transfer Case</u> Inspect transfer case for leaks, cracks, damage and loose bolts. Inspect oil seals for damage or leaks. Inspect transfer shift cable.									
a. Cracks/Damage									
b. Shift Cables									
c. Oil Pan Bolts									
d. Shift Cables									
. <u>Nose Bos/FrontAxle.</u> Inspect for loose cap screws and leaking seals. Inspect body for cracks and damage.									

7. <u>Front Axles.</u> Both sides Note; defect location in "Remarks" column. Inspect breathers on axle housing. Inspect input and output shaft seals for damage and leaks. Inspect front axle ball for excessive grease, this indicates worn or damage wiper seals.									
<u>No. 1 AXLE</u>									
a. Breathers									
b. Input Seals									
c.. Output Seals									
d. Wiper Seals									
<u>No 2 Axle</u>									
a. Breathers									
b. Input Seals									
c. Output Seals									
d. Wiper Seals									
8. <u>Air Shift Chambers.</u> Inspect for loose or damage air lines to chamber. Check for sharp kinks or rubbing against parts of the truck.									
a. Transfer Case									
b. No. 1 Axle									
c. No. 2 Axle									

9. <u>Service Brake System.</u> Inspect brake lining and brake disc for grooves and uneven wear. NOTE location of defective item in "Remarks" column.									
10. <u>Brake Chambers.</u> Inspect the spring brake chambers for serviceability.									
11. <u>Brake Chambers</u> Inspect for loose or damaged air lines to chamber.									
12. <u>Hydraulic Lines And Hoses.</u> Inspect for breaks cracks or leaks.									
13. <u>Air Tanks.</u> Inspect all tanks for serviceability.									
14. <u>Relay Valve.</u> Inspect for serviceability.									
<u>Passenger Side.</u> Inspect all lines and houses for loose fitting and damages.									
15. <u>Suspension System.</u> Inspect for cracks, breaks or looseness. NOTE location of defects in "Remarks" column.									
a. <u>Spring Leaks</u>									
b. Spring Leaves Ends								Check for alignment.	
c. Spring U-Bolts									

d. Spring Seats									
e. Spring Pressure Plate									
16. <u>Shock Absorbers.</u> Inspect front and rear for oil leaks or damage. Inspect shock absorber rubber bushings for cracks, dry rotting damage or looseness. NOTE location of defective item in "Remarks" column.									
a. Front Shock Absorber									
b. Rear Shock Absorber									
17. <u>Lockout Strut.</u> Inspect for cracks, breaks or obvious damage. Check lockout strut sensor cap and chain for damage.									
a. Operator Side									
b. Passenger Side									
18. <u>Torque Rods (Both Sides)</u> Check for damage and looseness where they attach to frame and axles. Tighten all mounting bolts. NOTE location of defective item in "Remarks" column.									
a. Front Torque Rods									
b. Rear Torque Rods									
c. Mounting Brackets									

19. <u>Spring Seat.</u> Check for metal to metal contact between spring seat and inner retainer on rear suspension, (both sides).									
20. <u>Steering Components.</u> a. Check steering system U-Joints and shafts for breaks, cracks, rust or excess wear.									
b. Check Steering gear mounting bolts for looseness. Inspect gear box for leaks.									
c. Inspect pitman arm for cracks, breaks, or loose mounting bolts.									
d.. Inspect upper and lower drag links for looseness, breaks, or cracks. Tighten nuts on both drag link at bellcrank and at steering arm.									
e. Inspect fuse link assembly for looseness, breaks, or cracks.									
f. Inspect both cylinders feedback linkage for serviceability.									
g.. Inspect both cylinders for scoring bends, or leakage. NOTE location of defects in the "Remarks" column.									
h. Inspect tie rods for serviceability.									

j. Inspect ALL hydraulic steering lines, hoses, and tubes for loose fittings and leaks.									
21. <u>Clutch Assembly</u>									
a. Inspect cover plate for rust, corrosion, nicks, burrs, and deformation. Check cover plate for collapsed, broken or cracked springs.									
b. Inspect friction plate for rust, corrosion, nicks, burrs, and deformation. No looseness allowed in rivets and linings. No distortion allowed in spline. Inspect bearing for nicks, burrs, looseness, galling, and heat discoloration.									
c. Inspect clutch lever actuating link rod assembly for binding and proper function.									
d. Inspect clutch pedal return spring for proper operation.									

**IROAN
PRE-INDUCTION CHECK SHEETS
FOR
FORK LIFT, VARIABLE REACH**

DATE:

REFERENCES:

TM 09276A

TM 09135A-15/1

U. S..M.C.. NO.

MILES:

JOB ORDER NO.

HOURS:

PRODUCTION NO.

HULL NO.

SERIAL NO.

ENGINE NO.

TRANSMISSION NO.

INSPECTOR'S NAME

BADGE NUMBER

SHIP NUMBER

TRANSMISSION DYNAMOMETER RUN SHEET
1724-M TRANSMISSION

SERIAL NO. _____ **DATE** _____

OPERATOR _____

A. Fill transmission to operating level with type C-3 or C-3 Grade 30 (above 32 degrees f) (0 degrees C).

B. Start engine and run at idle speed for two minutes.

C. With the engine at idle speed, add quantity necessary to bring oil level to FULL mark on dipstick.

D. Keep controls properly lubricated.

E. Run Dynamometer Run Test.

**1724M TRANSMISSION
DYNAMOMETER RUN SHEET**

Test	RPM	Throttle	Output	Specified Reading: Actual
				Main Pressure _____
				Reverse Signal
				Pressure _____
Reverse		Full	Unloaded	Coverter Flow _____
				Lube Pressure _____

Test	RPM	Throttle		Range Output Torque ()
				Minimum at input speed ()
Stall		Full	Stall	Actual _____ Required _____ psi
				Actual _____

Test	RPM	Throttle	Range	Main Pressure
Idle		Closed	Minium psi _____	Actual _____

Test	Rnge	Throttle	Output	Shift Point	Req	Actual
Full Throttle Upshift		Full	LoadedL-1			
				1c-1L		
				1-2		
				2-3		
				3-4		

Test	Range	Throttle	Output	Shift Point	Req	Actual
Closed Throttle Downshift		Closed Loaded	4-3	rpm		
				3-2		
				2-1		
				1L-1C		
				1-L		

Note Increase load until downshift occurs.

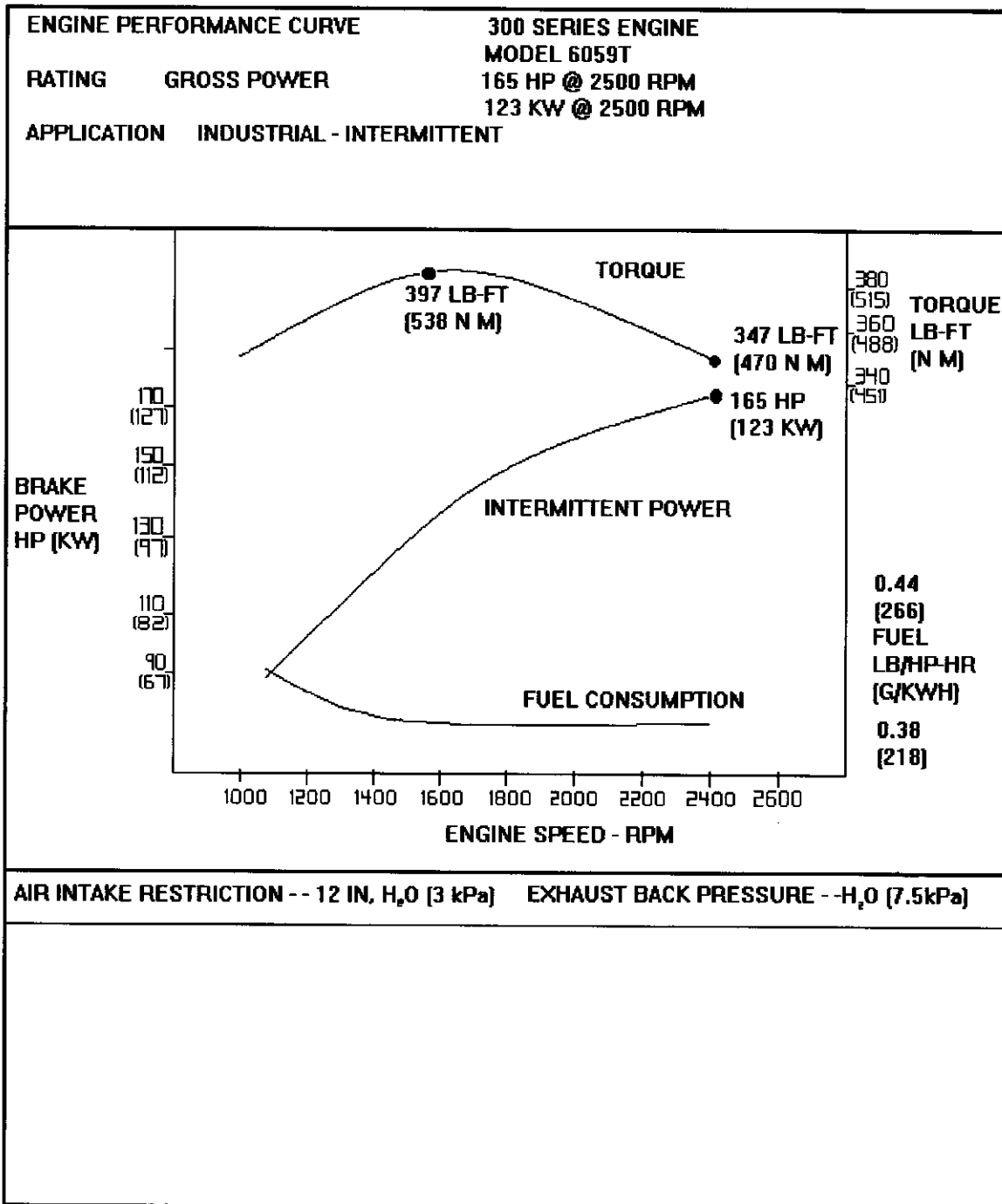
Test	Range	Throttle	Output	Shift Point	Req rmp	Actual
Downshift Inhibitor		Full	Loaded	4-3		
				3-2		

SOW 00-837-2-09276A-2/1

2-1
1-L

Note: Reduce input speed with each gear downshift.

SOW 00-837-2-09276A-2/1



FINAL ROAD TEST CHECKLIST

All safety checks must be satisfactorily completed prior to road test. If necessary, before performing tests and checks, wipe down components where grease, oil, or dirt could possibly form.

The following items shall be checked during the vehicle static test with the vehicle engine operating.

	S A F E T Y	H I S T O R Y	S E R V I C E	A D J U S T	R E P A I R	R E P L A C E	M O D I F Y	REMARKS	I N S P E C T
CHECK THE FOLLOWING GAUGES FOR CORRECT READINGS.									
a. Tachometer reading at idle									
b. Engine oil pressure, minimum of psi at idle.									
c. Air cleaner restriction indicator									
d. Low air busser/light									
e. Battery gauge registers in the green									
f. Fuel gauge register equivalent to tank level.									
g. Engine coolant (after road test)									
h. Transmission oil temperature before and after. Indicate in remarks col.									
i. Secondary air pressure									
2. CAB CONTROLS (can be done on road test)									
a. Windshield washer									
b. Windshield wipers left and right.									
c. Heater/defroster fan									
d. Heater ducts for air transfer case									
1. Shift level for case of operation									
2. Operates in high and low.									
e. Horn for proper operation									
3. BRAKE OPERATION (does it pull or stall when applied off a quick stop)									

a. Park brake holds with transmission in gear.									
b. Park brake release, operates properly									
c. Service brakes operate properly									
d. Fork brake operates properly									
4. TRANSMISSION OPERATION									
a. Drive (all gears) and reverse									
b. Transmission shifts smoothly									
c. Unusual noises									
4. ACCELERATOR									
a. Accelerates smoothly									
b. Doesn't stick or bind									
5. STEERING.									
a. Operates smoothly									
b. Doesn't wander or pull									
6. LIGHTS (operational)									
a. Dash panel									
b. Shift selector									
c. Headlights High and low beam									
d. Clearance side marker lights									
7. WINDSHIEL WIPERS									
a. Left wipers									
b. Right wipers									
8. TRUN SIGNALS									
a. Left signal									
b. Right signal									

**CONFIGURATION INSPECTION CHECKLIST
VEHICLE DATA**

IDENTIFICATION NUMBER	TAM NUMBER
Vehicle registration Number	
Vehicle Serial Number	
Hours at Inspection	
Miles at Inspection	
IROAN Date	
Hours at IROAN	
Miles at IROAN	
Engineering Change Plans (ECP)	
Maintenance Instruction (MI)	
SL-4	
Technical Manuals (TM)	

SECONDARY REPAIRABLE DATA

ITEM	SERIAL NUMBER
Engine	
Transmission	
Drive Axles	
Small Forks Assembly	
Large Fork Assembly	

SOW 00-837-2-09276A-2/1

(1 Data Item)

OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PP No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TOP _____ TM _____ OTHER _____ X
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D. SYSTEM/ITEM Truck, Forklift, Variable Reach	E. CONTRACT/PR NO.	F. CONTRACTOR
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1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A001	Request For Deviation	Configuration Management

4. AUTHORITY (Data Acquisition Document No.) DI-CMAN-80640B	5. CONTRACT REFERENCE SOW 3.4.2	6. REQUIRING OFFICE MCLBA (825)
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7. DD 250 REQ LT	8. DIST STATEMENT REQUIRED A	10. FREQUENCY ASREQ	12. DATE OF FIRST SUBMISSION SEE BLK 16	14. DISTRIBUTION		
11. AS OF DATE		13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	Draft	h. COPIES Final	
9. APP CODE						

18. REMARKS				
Blk 4 - Contractor format is authorized.	MCLBA (825-2)	0	1	0

Blks 10 & 12 - RFDs shall be submitted to obtain authorization to deliver nonconforming material which does not meet prescribed configuration documentation.

RFDs will be reviewed and disposition determined within 30 calendar days upon receipt by the Government.

RFDs shall be transmitted via E-Mail to the following address:
mbmatcomconfigmngmnt@matcom.usmc.mil

Distribution Statement A: Approved for public release, distribution is unlimited.

G. PREPARED BY		H. DATE	I. APPROVED BY	J. DATE
Dang Son		10-1-99	[Signature]	10-6-99

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TOP _____ TM _____ OTHER <input checked="" type="checkbox"/>
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D. SYSTEM/ITEM Truck, Forklift, Variable Reach	E. CONTRACT/PR NO.	F. CONTRACTOR
---	--------------------	---------------

1. DATA ITEM NO. A002	2. TITLE OF DATA ITEM Request For Waiver	3. SUBTITLE Configuration Management
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4. AUTHORITY (Data Acquisition Document No.) DI-CMAN-80641B	5. CONTRACT REFERENCE SOW 3.4.2	6. REQUIRING OFFICE MCLBA (825)
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7. DD 250 REQ LT	8. DIST STATEMENT REQUIRED A	10. FREQUENCY ASREQ	12. DATE OF FIRST SUBMISSION SEE BLK 16	14. DISTRIBUTION a. ADDRESSEE	b. COPIES Draft Final Reg Repr		
9. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	MCLBA (825-2)	0	1	0

<p>16. REMARKS</p> <p>Blk 4 - Contractor format is authorized.</p> <p>Blks 10 & 12 - RFWs shall be submitted to obtain authorization to deliver nonconforming material which does not meet prescribed configuration documentation.</p> <p>RFWs will be reviewed and disposition determined within 30 calendar days upon receipt by the Government.</p> <p>RFWs shall be transmitted via E-Mail to the following address: mbmatcomconfigmgmnt@matcom.usmc.mil</p> <p>Distribution Statement A: Approved for public release, distribution is unlimited.</p>	15. TOTAL	0	1	0

G. PREPARED BY Dang Sun	H. DATE 10-1-99	I. APPROVED BY 	J. DATE 10-6-99
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17. PRICE GROUP
18. ESTIMATED TOTAL PRICE